IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

MARK D. CHUEY

Group Art Unit: 2612

Examiner: Shimizu, Matsuichiro

Serial No.: 10/630,173

Filed: July 30, 2003

For: BUS-BASED APPLIANCE REMOTE CONTROL

Attorney Docket No.: LEAR 04348 PUS (04348)

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Mail Stop AF
Commissioner for Patents
U.S. Patent & Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

The Applicant requests review of the final rejection (final Office Action mailed June 19, 2006) of claims 1-26 in the above-identified patent application. No amendments are being filed with this request.

This request is being filed with a Notice of Appeal.

The review is requested for the reasons stated on the following pages 1-5.

CERTIFICATE OF MAILING UNDER 37 C.F.R. § 1.8 (FIRST CLASS MAIL)

I hereby certify that this paper, including all enclosures referred to herein, is being deposited with the United States Postal Service as first-class mail, postage pre-paid, in an envelope addressed to: Mail Stop AF, Commissioner for Patents, U.S. Patent & Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450 on:

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Remarks

Claim Rejections

- Claims 1-6, 8-16, 21, and 26 (including independent claims 1, 11-12, 16, and 26) are rejected under §103(a) as being unpatentable over U.S. Patent No. 6,009,355 ("Obradovich") in view of U.S. Patent No. 5,940,007 ("Brinkmeyer").
- Claims 17-20 and 22-23 are rejected under § 103(a) as being unpatentable over Obradovich in view of Brinkmeyer and U.S. Patent No. 5,903,226; and claim 7 is rejected under § 103(a) as being unpatentable over Obradovich in view of Brinkmeyer and Korean Application No. 2002078726.
- Independent claims 24-25 are rejected under § 103(a) as being unpatentable over Obradovich in view of Brinkmeyer and U.S. Patent No. 6,031,465 ("Burgess").

Examiner's final Office Action Position Regarding the Claims and the Obradovich/Brinkmeyer Combination

Regarding the independent claims, the Examiner posited Obradovich teaches a vehicle-based programmable appliance control system (Figs. 1-2, control panel 205) having: a vehicle-based (serial) data communication bus 107; a user activation input (Fig. 10, locks via screen 209) connected by a 1st interface 104 to the bus; a RF transmitter remotely located from the user activation input and connected by a 2nd interface 106 to the bus (col. 20, lines 43-65, remote vehicle disable); and control logic ("CL") 105 connected by a 3rd interface to the bus.

The Examiner indicated Obradovich is silent on: (A) upon being asserted, the user activation input provides an activation input signal to the bus for receipt by the CL; (B) the CL receives the activation input signal from the bus, generates control signals corresponding to the activation input signal, and provides the control signals to the bus for receipt by the transmitter; and (C) the transmitter receives the control signals from the bus, generates a RF appliance activation signal in accordance with the control signals, and transmits the appliance activation signal for receipt by an appliance.

The Examiner posited Brinkmeyer teaches a RF transmitter (Fig. 1, col. 3, line 64+ , key fob 1) transmits control signal to CL of vehicle transceiver 4a (col. 4, lines 9-39), the CL generates signals and transmits garage door opener (GDO) signals to GDO receiver 2a for portable remote control.

Applicant's Position Regarding the Claims and Obradovich/Brinkmeyer Combination

Obradovich teaches a vehicle bus 107 interconnecting user inputs 104 such as a touch screen 104a, control panel 205, etc., a processor 105, and communication interfaces 106 such as a phone 106a, navigation 106d, and beacon 106e (Fig. 1). The displayed touch screen 209 (Fig. 10) cited by the Examiner identifies vehicle related inputs (such as "seats", "locks") but does not identify inputs related to a remotely controlled appliance such as a GDO. The remote disable vehicle feature cited by the Examiner (col. 20, lines 43-65) relates to an operation in which a vehicle transceiver transmits data to a remote third party and the third party determines whether to remotely disable the vehicle based on the data. Obradovich does not teach/suggest that the remote control disable feature involves an input signal from a user input causing the transmitter to transmit the data to the third party.

Brinkmeyer teaches a fob 1 wirelessly communicating a GDO signal to a GDO receiver 2 via a radio channel Fu1 for remote GDO control. As fob 1 is portable, the fob includes its own control logic ("CL") for generating the signal and its own RF transmitter for communicating the signal over radio channel Fu1 to GDO receiver 2 (Fig. 1). Brinkmeyer teaches the signal transmitted by fob 1 can be "converted" to vehicle transceiver 4a. In this case, fob 1 wirelessly communicates the signal to transceiver 4a via radio channel Fu3 and then transceiver 4a wirelessly communicates the signal to GDO receiver 2 via radio channel $Fu1_{opt}$. (Fig. 1; col. 3, line 64 to col. 4, line 22.) Communication between fob 1 and transceiver 4a is done wirelessly via radio channel Fu3. Col. 4, lines 37-39 of Brinkmeyer, "The transmitter/receiver 4a [vehicle transceiver 4a] in the vehicle 4 is connected with the other components of the electric system of the vehicle, via a data bus system (not shown)." Notably, Brinkmeyer does not teach/suggest fob 1 and transceiver 4a communicating with one another via the non-shown data bus system.

The Claims Compared to the Obradovich/Brinkmeyer Combination

As noted by the Examiner, Obradovich does not teach/suggest step (A) upon being asserted, the user activation input provides an activation input signal to the vehicle-based bus for receipt by the control logic. Brinkmeyer does not teach/suggest step (A) as Brinkmeyer teaches (Fig. 1) a portable fob 1 having its own user activation input 5, transmitter (see antenna symbol), and control logic ("CL") (i.e., transmitter circuitry) interconnected with one another

without the use of a vehicle-based bus in which an activation input signal from user activation input 5 is provided to the CL without the use of a vehicle-based bus. Brinkmeyer does not teach/suggest providing an activation input signal from a user activation input to a vehicle-based bus interconnecting the user activation input, the transmitter, and the CL as claimed.

As noted by the Examiner, Obradovich does not teach/suggest step (B) the CL receives the activation input signal from the vehicle-based bus, generates control signals corresponding to the activation input signal, and provides the control signals to the bus for receipt by the transmitter. Brinkmeyer does not teach/suggest step (B) as Brinkmeyer teaches (Fig. 1) a fob 1 having its own user activation input 5, transmitter, and CL interconnected with one another without the use of a vehicle-based bus in which the CL receives the activation input signal from user activation input 5 without the use of a vehicle-based bus and in which the CL provides a corresponding GDO control signal to the transmitter without the use of a vehicle-based bus. Brinkmeyer does not teach/suggest the CL receiving the activation input signal from a vehicle-based bus interconnecting the user activation input, the transmitter, and the CL as claimed nor does Brinkmeyer teach/suggest the CL providing the control signals to a vehicle-based bus interconnecting the user activation input, the transmitter, and the CL for receipt by the transmitter as claimed.

As noted by the Examiner, Obradovich does not teach/suggest step (C) the transmitter receives the control signals from the bus, generates a RF appliance activation signal in accordance with the control signals, and transmits the appliance activation signal for receipt by an appliance. Brinkmeyer does not teach/suggest step (C) as Brinkmeyer teaches a portable fob 1 having its own user activation input 5, transmitter, and CL interconnected with one another without the use of a vehicle-based bus in which the transmitter receives a corresponding control signal from the CL without the use of a vehicle-based bus. Brinkmeyer does not teach/suggest the transmitter receiving control signals from the CL via a vehicle-based bus interconnecting the user activation input, the transmitter, and the CL as claimed.

Applicant's Response to the Advisory Action

In the Advisory Action, the Examiner posited since Obradovich and Brinkmeyer teach remote vehicle activation, they are combinable to teach a vehicle-based bus 107 (Obradovich) and a fob 1 (Brinkmeyer) transmitting activation signal Fu3 (Brinkmeyer) to

vehicle remotely wherein signal receiving vehicle transceiver 4a is connected with other vehicle electric system components via a data bus system (col. 4, lines 23-39 of Brinkmeyer). As noted above, the Examiner posited Brinkmeyer teaches fob 1 transmitting control signals to transceiver 4a and that transceiver 4a includes control logic.

As noted above, transceiver 4a acts as a repeater by wirelessly transmitting a signal to GDO receiver 2 via radio channel $Fu1_{opt}$ upon wirelessly receiving the signal from fob 1 via radio channel Fu3. Although transceiver 4a is connected with vehicle electric system components via a data bus (col. 4, lines 37-39), Brinkmeyer does not teach/suggest fob 1 and transceiver 4a communicate over the data bus between one another as claimed. Brinkmeyer discloses fob 1 and transceiver 4a communicating with one another via a radio channel Fu3. Fob 1 communicating a signal to transceiver 4a upon user activation input 5 of fob 1 being activated does not depend on whether transceiver 4a is connected to a vehicle-based bus or is connected to other elements via a vehicle-based bus. Fob 1 wirelessly communicates the signal via radio channel Fu3 directly to transceiver 4a. Whether transceiver 4a is connected to a vehicle-based bus has nothing to do with this communication. User activation input 5 of fob 1 is "connected" to transceiver 4a in the sense that a signal generated upon activation of user activation input 5 is transmitted to transceiver 4a via radio channel Fu3, but user activation input 5 is not connected in any sense to transceiver 4a via a vehicle-based bus even though transceiver 4a may be connected to a vehicle-based bus.

Examiner's final Office Action Position Regarding Independent Claims 24-25 and the Obradovich/Brinkmeyer/Burgess Combination

The Examiner posited all subject matters except the control logic in rolling code programming mode generating and transmitting a sequence of rolling code activation signals until user input indicates a successful rolling code transmission scheme in independent claims 24-25 are met by the Obradovich/Brinkmeyer combination. The Examiner posited Burgess teaches this step (col. 4, lines 46-64, rolling-code type synchronization for maintaining proximity communication; col. 5, lines 12-20, establishing and maintaining synchronization) for providing proximity communication. As discussed above, the Obradovich/Brinkmeyer combination does not teach/suggest "all subject matters except the control logic ..." Further, the Examiner's cited portions of Burgess in no way teach or suggest the user input limitation

set forth in claim 24. The Examiner posited Burgess discloses rolling-code type synchronization (col. 4, lines 49-64) schemes which establishes secure handshaking between communication devices and, as such, the user keeps transmitting signals until the synchronization is established successfully. Col. 4, lines 49-64 of Burgess contains no teaching or suggestion that a user keeps transmitting signals until the synchronization is established successfully. If synchronization is lost, then the user can transmit signals infinitely and synchronization will still not occur ("if a fob is used repeatedly outside of the range of the appropriate receiver, synchronization will be lost, thereby disabling the ability of the fob to interact with the vehicle"). This scenario assumes that synchronization has been obtained. To gain synchronization, "the transmission of an initial broadcast by the fob initiates a timing sequence within the receiver so that subsequent communications may be conducted in a synchronous manner." An "initial" broadcast is used and Burgess contains no teaching of a user transmitting signals until user input indicates successful synchronization. Thus, claim 24 is further patentable over the Obradovich/Brinkmeyer/Burgess combination.

Conclusion

As neither Obradovich nor Brinkmeyer teach/suggest steps (A), (B), or (C), independent claims 1, 11-12, 16, and 24-26 and their dependent claims are patentable over the Obradovich/Brinkmeyer combination. Claim 24 is additionally patentable over the Obradovich/Brinkmeyer/Burgess combination as noted above.

Respectfully submitted,
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